Vol. IV. No. 80

MARCH 25, 1943

THE AEROPLANE SPOTTER

FOR THE ALERT

ALTERNATE
THURSDAYS
3D

OF ALL NEWSAGENTS
OR DIRECT FROM THE
PUBLISHERS, POSTAGE PAID

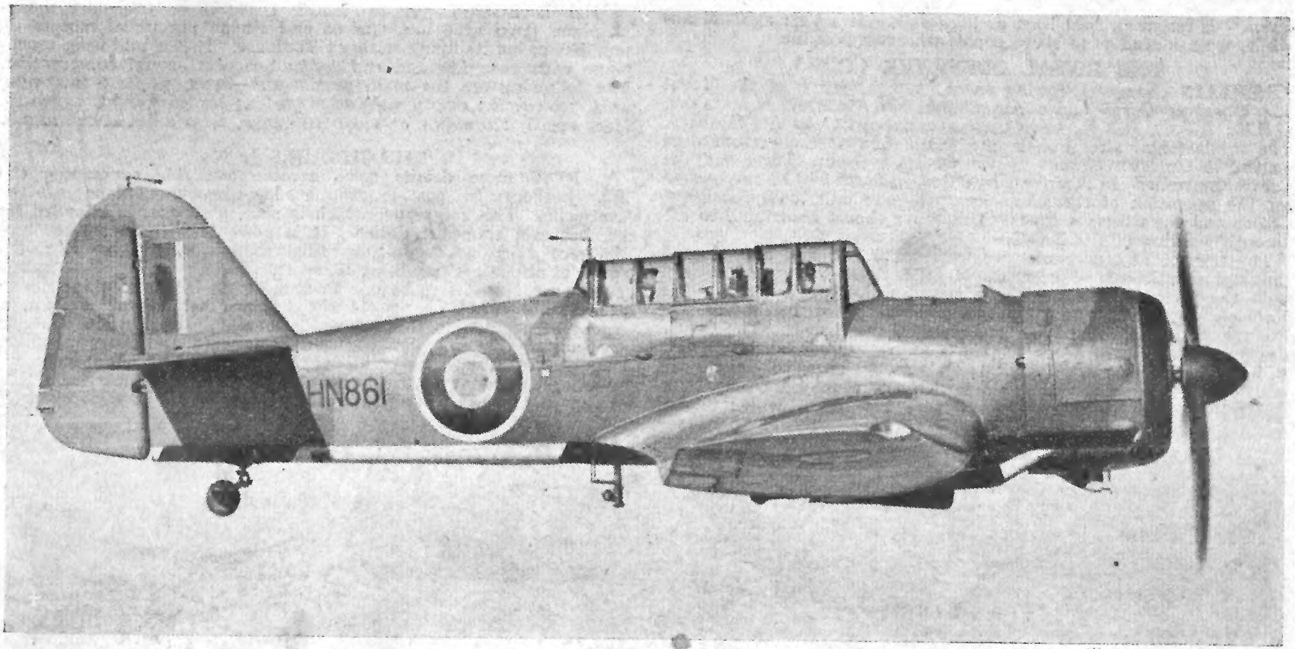
12 Months 8/8 6 Months 4/4 3 Months 2/

Proprietors:
TEMPLE PRESS LTD.

Managing Director:
ROLAND E. DANGERFIELD

Head Office:
BOWLING GREEN LANE,
LONDON, E.C.1
Telephone: TERminus 3636

Incorporating the Bulletin of
The National Association of Spotters' Clubs
Edited by PETER G. MASEFIELD
M.A. (Eng.) Cantab; A.F.R.Ae.S.
Technical Editor of "THE AEROPLANE."



[*"Aeroplane" photograph*

AN AIR TUG.—Miles Martinet single-motor target and glider towing monoplane. With an 830 h.p. Bristol Mercury motor the top speed is 232 m.p.h. when not impeded by any trailers.

SEVERAL people have asked recently why modern fighters do not fly faster if the Schneider Trophy winners achieved speeds of around 400 m.p.h. nearly 12 years ago.

The simple answer is that the Schneider racers were freaks flown at great risk by specially selected, specially trained and highly skilled pilots. Moreover the Schneider racers were kept in flying condition only by the most careful maintenance and had a total flying life of only some 20 hours. The modern fighter must be capable of flying and fighting for hundreds of hours without major overhauls. It must be able to withstand a great deal of punishment, to fly from small and makeshift aerodromes in the snows of Russia or the heat of the Western Desert. And it must operate with a heavy load of armour and armament at heights up to 40,000 ft. or more.

Thus the fact that the modern single-seat fighter such as the Supermarine Spitfire IX or the Hawker Typhoon has a normal top speed of more than 400 m.p.h. is no mean achievement. Just what an achievement it is on the part of both airframe and engine designer may perhaps be better understood by a glance at those now fabulous Schneider achievements.

In 1927 the Schneider Trophy Contest was won by a Supermarine S.5 (980 h.p. Napier Lion VIIB motor) at an average speed of 281.49 m.p.h. for the 217-mile course, covered in a flying time of 46 mins. 15 secs.

In 1929 the Race was won by a Supermarine S.6 (1,900 h.p. Rolls-Royce R motor) at an average speed of 328.63 m.p.h. for the 217-mile course, covered in a flying time of 39 mins. 42 secs.

In 1931 the Race was won finally by a Supermarine S.6B (2,300 h.p. Rolls-Royce R motor) at an average speed of 340.08 m.p.h. for the 217-mile course, covered in a flying time of 38 mins. 23 secs.

During those years the World's Speed Record over a 3 km. (1.863-mile) course was raised first by the Gloster-Napier VI to 336.3 m.p.h. (Sept. 10, 1929), then by the S.6 to 357.7 m.p.h. (Sept. 12, 1929), then to 379.05 m.p.h. by the S.6B (Sept. 13, 1931), and finally to 407.5 m.p.h. by the S.6B (Sept. 29, 1931)—later to be beaten again by the Italians.

In the final record-breaking attempt the Rolls-Royce Company boosted the long-suffering "R" motor to give 2,600 h.p. and guaranteed it for five minutes only. Actually it ran faultlessly for 27 minutes in setting up the record. Yet earlier on, only a month or two before the 1929 race, the engine could not be run even on the test bed for more than half an hour at a much lower horse-power without something breaking.

There is no doubt that all the intensive research and development put in at feverish speed to prepare those racing seaplanes and racing engines for the Schneider Trophy Contests has resulted in the fact that we have to-day in the Royal Air Force the best single-seat fighters in the World. Those racing seaplanes carried all their fuel in their floats; they were death-traps if they were not taken-off the water with exactly the right technique; they had wing surface radiators so vulnerable that you could put your finger through them, the engines had to be changed after almost every flight, their forward view was nil and their alighting "run" several miles. Yet the lessons learned with them have been built into the fast, sturdy, hard hitting, swift climbing fighters of the Battle of Britain and to-day.

The secret of progress is development and the secret of development is the urge to achievement. The Schneider Trophy provided that urge. Let us hope that when this War is won some new sporting venture will arise so that aeronautical development will never be allowed to falter in Great Britain.

NEWS OF THE WEEK

YOUR COPY THIS WEEK

SUSPENSION of the supplementary allowance of paper for THE AEROPLANE SPOTTER has compelled Temple Press Ltd., the proprietors and printers of the journal, to reduce the circulation by 50 per cent. We much regret this cut; and we trust that a re-examination of the circumstances in which the journal is produced and of the demand for its help may lead the authorities to revise their decision.

When THE AEROPLANE SPOTTER was founded in Jan., 1941, it was the sole agency for providing material useful in the study of aircraft recognition. Its value was officially acknowledged at a later date and that approval was backed by the allocation of a supplementary quota of paper when an increase in the size of the journal and in the demand for it made calls beyond the scope of existing paper allocations. Protests from our readers show that the desire to obtain THE AEROPLANE SPOTTER is as strong as ever it was. We hope to be able to satisfy the Powers that its place in the training of pilots, observers, gunners, spotters and others, to whom "recognition" is essential, is at least as high as it was a year ago. Meanwhile, we ask readers to share copies wherever possible.

THE ROYAL OBSERVER CORPS

CERTAIN changes following on the reorganisation of the Royal Observer Corps under Air Commodore Geoffrey H. Ambler, O.B.E., A.F.C., R.A.F., have been announced by the Air Ministry. The fundamental alteration is the elimination of the present dual control in Observer Groups by the Observer Group Officer and the Centre Controller. In future a single Commandant will be responsible for the operation of the whole group as one unit, comprising the Centre and the Observer Posts. This move should contribute to the smooth working of the R.O.C.

The present officers' ranks are to be abolished and a graduated ranking substituted. For example, the Area Commandant will hold the rank of Observer Captain and will wear four navy-blue rings on the sleeves, and a Group Commandant will be an Observer Commander, who will have three rings on the sleeves. The Centre Controller, who will work as the Group Commandant's deputy, will be an Observer Lieutenant (1st class), which appointment will entitle him to wear two thick rings with a thin one between. Duty Controllers, who deputise for a Centre Controller, will rank as Observer Officers equally with the Observer Officers, who will control posts precisely the same as the former Assistant Observer Group Officer. Observer Officers will wear one navy-blue ring. The Head Observer will in future be called a Chief Observer and his deputy a Leading Observer.

Wearing of the R.O.C. uniform on duty will in future be compulsory for all ranks. In addition, new proficiency tests have been officially instituted and, although not compulsory, will have to be passed by Observers who wish to avoid the charge of being deemed inefficient. The basic test is in three parts, only one of which deals with aircraft recognition. This will bring into line that proportion of rank and file who previously had little interest in the voluntary efforts made spontaneously by clusters of Observers to improve the standard in aircraft recognition. On the other hand, the Royal Observer Corps hopes to cater at the same time for the enthusiast by the creation of higher tests, which will be quite voluntary.

A NEW FRENCH TRANSPORT

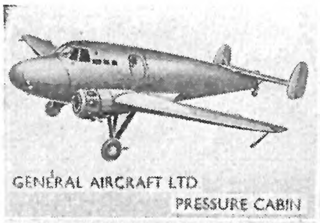
THE BREGUET 500 two-motor 23-passenger transport monoplane (two 1,600 h.p. Gnôme and Rhône 14R radial motors) is now beginning its flying trials at Toulouse. It is a mid-wing monoplane with twin fins and rudders and is of all-metal construction. The following are the main particulars:—Span, 75 ft. 6 in.; wing area, 720 sq. ft.; empty weight, 15,900 lb.; loaded weight, 29,800 lb. Max. speed, 286 m.p.h. at 5,000 ft.; range, 1,250 miles at 248 m.p.h.

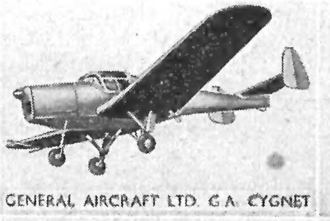
THE JUNKERS Ju 90s

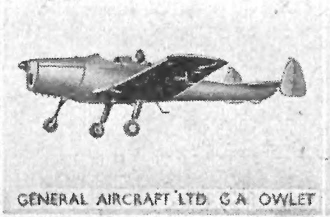
A FEW more details have become available concerning the Junkers Ju 90s four-motor low-wing monoplane of the Luftwaffe. This aeroplane, which is now in service, is intended for bomber and transport duties. It is powered with four 1,600 h.p. BMW801 14-cylinder two-row radial motors which give it a top speed of about 275 m.p.h. at 18,000 ft.

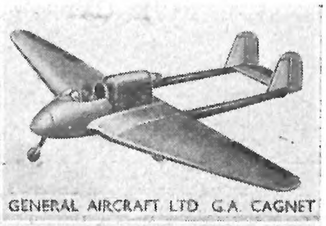
Armament apears to be one 13 mm. (0.512 inch.) machine-gun in a rotatable turret on top of the fuselage behind the cockpit, a defensive position in the tail and a small blister position offset to port under the nose, housing both a forward and rearward firing gun. As a transport, accommodation is provided for about 40 troops or a large amount of freight in the cabin, differs little from that of the Ju 90B and has an internal capacity of about 3,400 cu. ft.

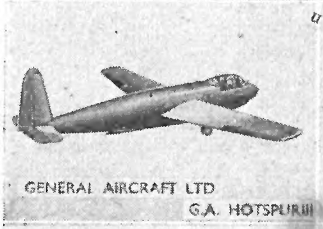
THE SPOTTERS' A.B.C.—L

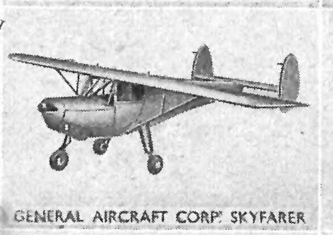

GENERAL AIRCRAFT LTD
PRESSURE CABIN

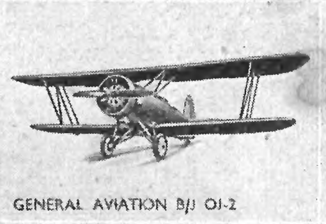

GENERAL AIRCRAFT LTD. G.A. CYGNET

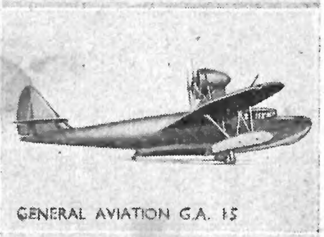

GENERAL AIRCRAFT LTD. G.A. OWLET

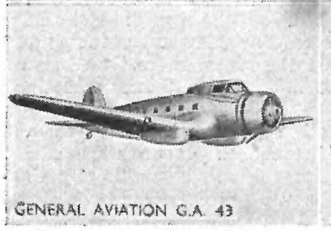

GENERAL AIRCRAFT LTD. G.A. CAGNET

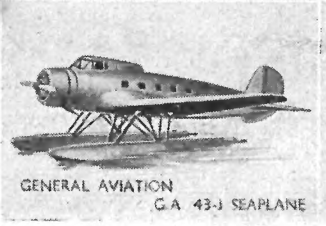

GENERAL AIRCRAFT LTD
G.A. HOTSPUR III

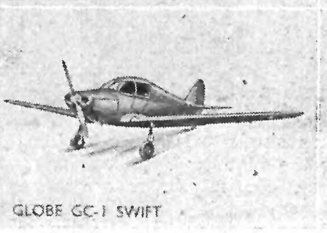

GENERAL AIRCRAFT CORP. SKYFARER

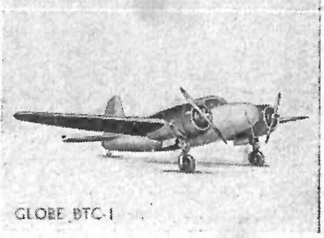

GENERAL AVIATION B/J OJ-2


GENERAL AVIATION G.A. 15


GENERAL AVIATION G.A. 43


GENERAL AVIATION
G.A. 43-J SEAPLANE


GLOBE GC-1 SWIFT


GLOBE BTC-1

THE "GENERALS."—General Aircraft Ltd. in England, the General Aircraft Corporation in the U.S.A. and the General Aviation Corporation in the U.S.A. [600 have all made aeroplanes and are in no way connected. The **G.A.L. Monospar Pressure Cabin** monoplane was built in 1939 for research purposes. Only one was made. The two-seat cabin was supercharged by a 45 h.p. Pixie motor. Basically the Pressure Cabin Monospar was an S.T.25 with two unsupercharged Pobjoy Niagara III motors. The all-metal **Cygnet** was built in 1937 by C.W. Aircraft and then had a single fin and rudder and conventional undercarriage. General Aircraft Ltd. took over the design, fitted twin fins and rudders and a tricycle undercarriage and put the new Cygnet into production in 1939. With a 150 h.p. Cirrus Major motor the top speed is 135 m.p.h. The Cygnet has side-by-side seating for two. Developed from it, the all-metal **G.A.L. Owlet** first flew on September 5, 1940, as a two-seat tandem tricycle trainer with open cockpits. With a 150 h.p. Cirrus Major the top speed is 125 m.p.h. The **G.A.L Cagnet** was designed as a side-by-side two-seat light tricycle trainer for the Civil Air Guard, with a pusher motor. The War prevented its devlopement beyond prototype flying. The **G.A.L. Hotspur III** was designed as a troop-carrying glider and is now used for training. It is entirely of wood and is normally towed at about 90 m.p.h. The Hotspur III differs from the Hotspur II in that it has nose, instead of wing, towing. The Hotspur I had wings of 16 ft. bigger span—61 ft. 10 in. compared with 45 ft. 10¾ in. The American **General Aircraft Corp. Skyfarer** is a two-seat side-by-side high-wing tricycle monoplane with twin fins. With a 75 h.p. Lycoming motor the top speed is 100 m.p.h. It is officially certified as "incapable of spinning." No rudders are fitted, merely fins. Turning is by means of the ailerons and elevators. There are no foot controls except brakes. The General Aviation Manufacturing Corporation of the U.S.A. was formed out of the American Fokker Aircraft Corporation in 1931. In 1934 the General Aviation Corporation became North American Aviation Inc., which it now is. Thus, present day **North American** aeroplanes are descended from the American Fokkers of pre-1931, and, through them, from the Fokker aeroplanes of the Great War, 1914-18. The **General Aviation B/J OJ-2** is a two-seat observation biplane with a 400 h.p. Wasp Junior motor and a top speed of 154 m.p.h. Twelve were built for the U.S. Navy in 1934-35. There was also a single-float seaplane version. The **G.A 15** is a two-motor Coastguard flying-boat with two 420 h.p. Wasp pusher motors. The **G.A. 43** is a ten-passenger monoplane with one 700 h.p. Cyclone motor and a top speed of 203 m.p.h. The **G.A. 43-J** is a float seaplane version, a number of which are used in Colombia, South America. Maximum speed 161 m.p.h. The American **Globe Swift** is a two-seat monospar light aeroplane with an 80 h.p. Continental motor and inwards retracting undercarriage. Top speed 145 m.p.h. The **Globe BTC-1** is a two-motor six-passenger transport with two 300 h.p. Jacobs L-6 motors and a top speed of 206 m.p.h. The undercarriage retracts.

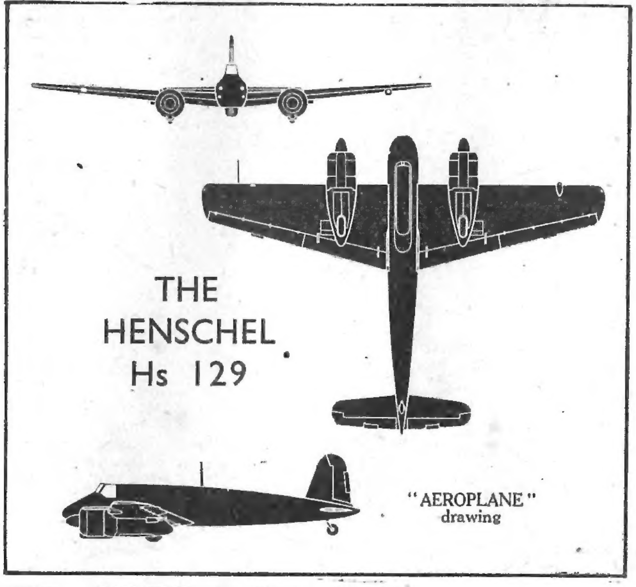
AIRCRAFT IN THE NEWS—LXXX

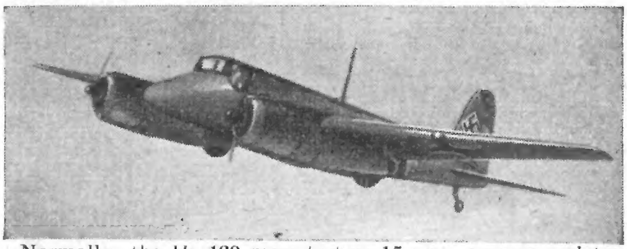
THE HENSCHEL Hs 129

THE HENSCHEL Hs 129 has been in action recently against the British, American and French forces in North Africa and before that on the Russian front.

In action the single-seat Hs 129 is used by the Luftwaffe for attacking concentrations of troops, strong points, motor transport, armoured fighting vehicles and communications from heights rarely exceeding 1,500 ft. and often from below 50 ft.

The Germans appear to have realised the superiority of the close-support attack bombers over dive bombers, and both the Henschel Hs 129 and the Messerschmitt Me 210 are replacing the Junkers Ju 87D.





Normally, the Hs 129 mounts two 15 mm. cannon and two 7.9 mm. machine-guns in the nose and a 30 mm. cannon under the fuselage. Provision is made to replace the 30 mm. cannon (which is intended for tank-busting) by a rack for a bomb of 551 lb.

Originally, the Hs 129 was powered with two 450 h.p. Argus As 410 in-line motors which gave it a maximum speed of approximately 225 m.p.h. at sea level. Now two 680 h.p. French Gnôme-Rhône 14M air-cooled radial motors have been installed.

The fuselage is of all-metal stressed skin construction except for the forward section, which is a welded steel tube structure covered with armour plate varying in thickness from 6 mm. to 12 mm. Armour also protects the lower sections of both motors, the carburetters and oil cooler. There is a bullet-proof glass windscreen 3 ins. thick.

DIMENSIONS.—Span, 44 ft. 6 in.; length, 33 ft. 3 in.

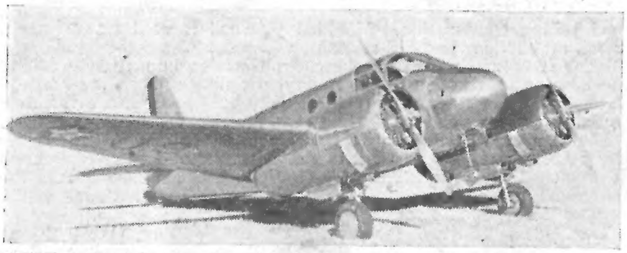
WEIGHT.—Loaded, about 9,700 lb.

PERFORMANCE.—Max. speed, about 270 m.p.h. at sea level.

POINTS OF RECOGNITION.—Low-wing monoplane with two underslung radial motors. Short stubby nose extending only a short way in front of the motors. No taper on the leading edge of the mainplane, well tapered trailing edge and blunt tips. Long fuselage tapering to single fin and rudder with tapered leading and trailing edges and a rounded top. No taper on the trailing edge of the tailplane, but tapered leading edge and rounded tips. Fixed tailwheel. Note the fairing under the fuselage for the 30 mm. cannon.

CIVIL IDENTIFICATION—LXXX

THE BEECH AT-10 WICHITA



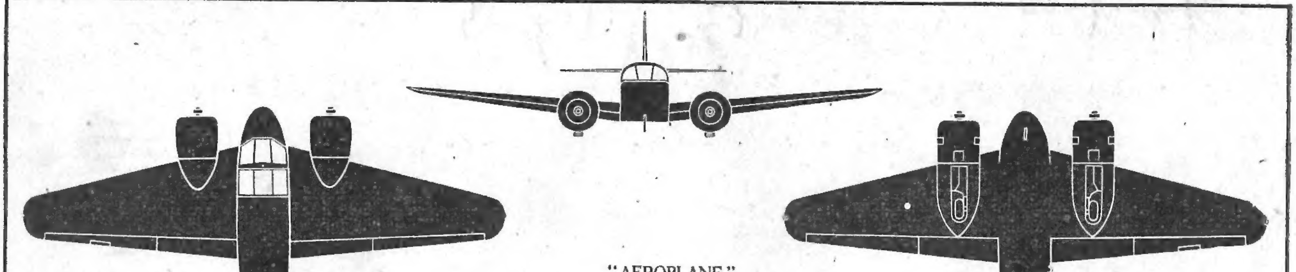
THE BEECH AT-10 WICHITA (two 280 h.p. Lycoming motors) is a new advanced trainer used by the U.S. Army Air Forces as a transitional trainer for bomber pilots. It has side-by-side seating for the instructor and pupil pilot and is equipped with a complete set of instruments and an automatic pilot. It was first produced in 1942 and was designed especially for two-motor training.

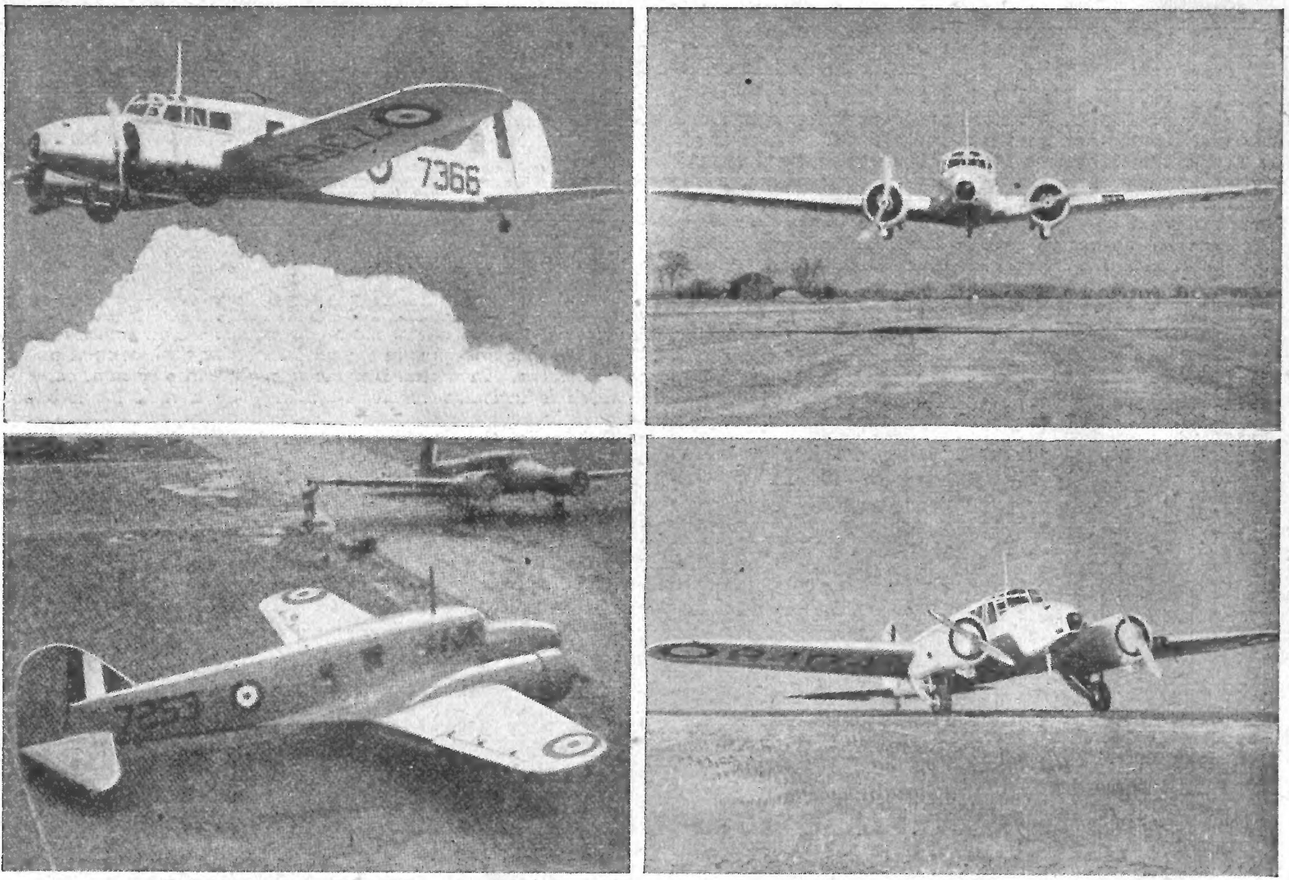
To speed production and release materials for military operational types, the Beech AT-10 is built mainly of wood. The fuselage is of wood monocoque construction except for the pilots' compartment, which is of metal construction. Of the major assemblies 85 per cent. are built of wood by sub-contractors who were formerly in the wood-working industry. The assemblies are permanently bonded with a new synthetic resin glue which is much used in the U.S.A. for plywood production. Even the fuel tanks, which are claimed to be leak-proof, are built of wood.

The AT-10 is similar in general characteristics outwardly to other Beechcraft models except that it has a single fin and rudder instead of the more usual twin fins and rudders of most Beechcraft types.

No details or performance figures of the Beech Wichita have been released by the U.S. Army Air Forces, but it is said to have a high cruising speed and a reasonable landing speed. It is a low-wing cantilever monoplane with single fin and rudder and normal retracting undercarriage. Production is said to be on a rising scale and to be much faster with the wooden version of the trainer than if it were made of all metal, and at much less cost.

POINTS OF RECOGNITION.—Low-wing monoplane with two radial motors, partly underslung, which protrude in line with the nose of the fuselage. Both wing and tailplane are sharply tapered on the leading edge and have rounded tips. The wings have dihedral from the roots.





NAVIGATIONAL TRAINERS.—Avro Anson V trainers with the new Vidal process moulded plywood fuselages are now in production in Canada.

LESSER KNOWN TYPES—LXI

THE AVRO ANSON V

THE AVRO ANSON V is a Canadian version of the well-known British advanced trainer and is powered with two 450 h.p. Pratt and Whitney Wasp Junior motors. One of its chief features is the use of plastic construction in the fuselage.

The Avro Anson I (two 350 h.p. Armstrong Siddeley Cheetah IX motors) from which the later Canadian versions are developed, was one of the first monoplanes to be adopted by the R.A.F. It was a military modification of the civil Avro 652 and was put into production as the Avro 652A when the R.A.F. expansion programme began in 1938 while bigger and faster military types were being developed. Up to the Spring of 1941 Anson Is were used by Coastal Command for over-sea reconnaissance and escort of convoys. Since then Anson Is have been used in this country as air taxis for Air Transport Auxiliary and as advanced trainers.

When the British Commonwealth Air Training Plan started in 1939, numbers of Anson Is were sent to Canada. Later additional airframes were sent over and the Canadians fitted them with both Jacobs (Anson II and III) and Wright Whirlwind motors (Anson IV). The Whirlwind version was under-powered.

A report from a committee of the National Research Council to the Aircraft Production Branch of the Canadian Department of Munitions and Supply on a U.S. process for building airframes from moulded veneers of spruce and poplar led Bristol Federal Aircraft, the Canadian Government Company in charge of Anson production, to obtain the patents for the Vidal process.

The Vidal-Anson fuselage is of mixed moulded plywood and welded steel tubing construction. Moulded plywood is used for the nose, cabin, aft fuselage and tail sections, whereas a plywood-covered steel tubular structure is used for the cockpit section immediately behind the nose. Construction of the mainplane, tailplane, rudder and elevators remains the same as in the British-built airframes with fabric covering on a welded steel tube structure.

The Anson V (two 450 h.p. Pratt and Whitney Wasp Junior R-985-AN14B motors) is a navigational trainer and is in production at Montreal and Brantford. The parts made at these plants are assembled at Winnipeg by the Canadian Car and Foundry Co. and by MacDonald Bros. Aircraft, Ltd.

The Anson VI (two 450 h.p. Pratt and Whitney Wasp Junior R-985-AN14B motors) also incorporates a moulded plywood fuselage and is in production side by side with the Anson V. The Anson VI is a bombing and gunnery trainer and differs from the Anson V in that it has a gun turret amidships.

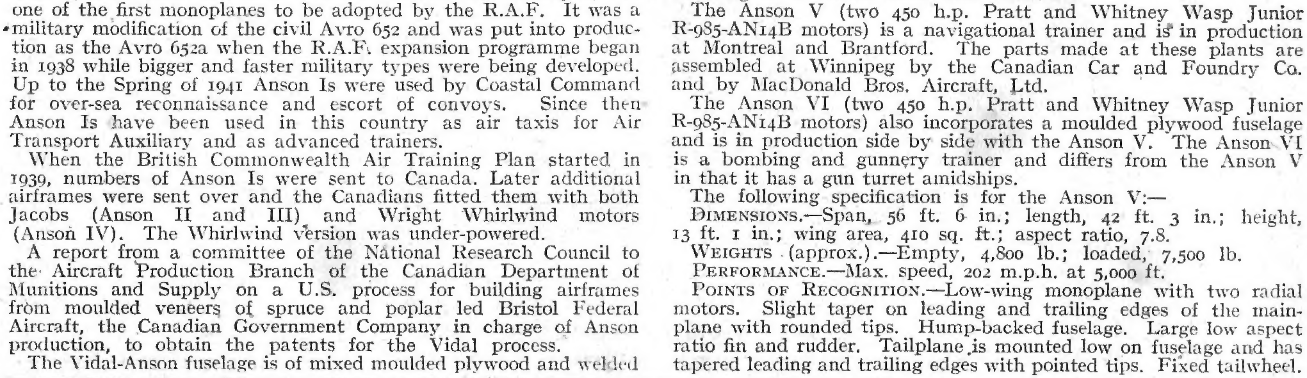
The following specification is for the Anson V:—

DIMENSIONS.—Span, 56 ft. 6 in.; length, 42 ft. 3 in.; height, 13 ft. 1 in.; wing area, 410 sq. ft.; aspect ratio, 7.8.

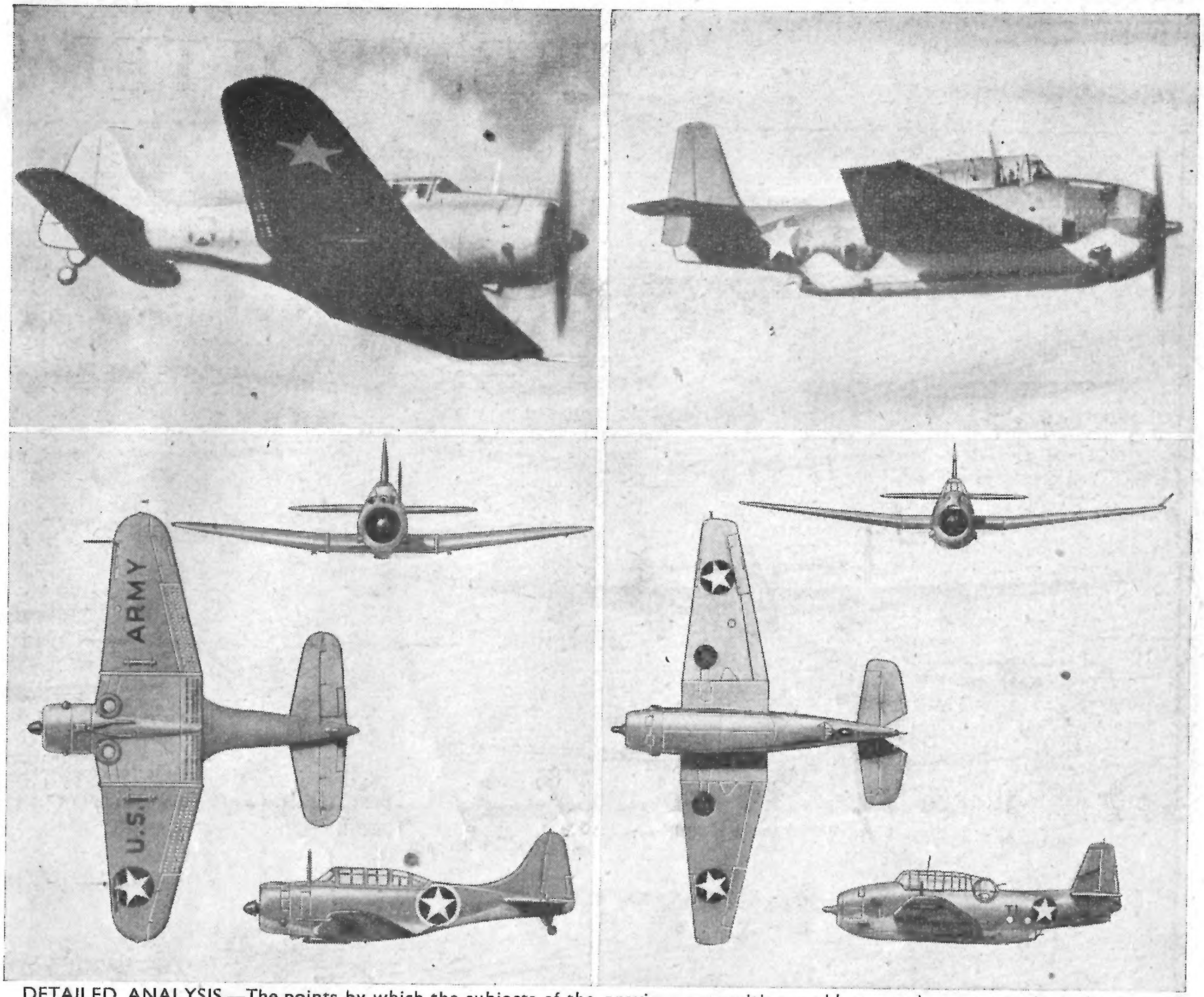
WEIGHTS (approx.).—Empty, 4,800 lb.; loaded, 7,500 lb.

PERFORMANCE.—Max. speed, 202 m.p.h. at 5,000 ft.

POINTS OF RECOGNITION.—Low-wing monoplane with two radial motors. Slight taper on leading and trailing edges of the mainplane with rounded tips. Hump-backed fuselage. Large low aspect ratio fin and rudder. Tailplane is mounted low on fuselage and has tapered leading and trailing edges with pointed tips. Fixed tailwheel.



"AEROPLANE" drawing



DETAILED ANALYSIS.—The points by which the subjects of the previous recognition problems can be recognised are illustrated in the photographs and drawings by W. J. Everest of the Douglas A-24 Dauntless (left) and the Grumman TBF-1 Avenger (right).

Aircraft Recognition

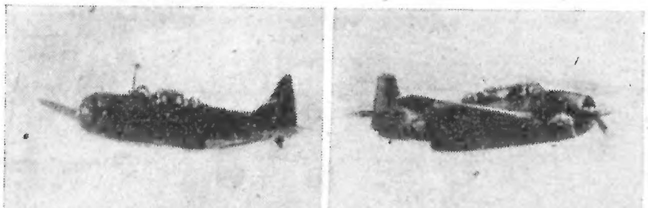
THE Douglas A-24 Dauntless (one 950 h.p. Wright Cyclone R-1820-32 radial motor) and the Grumman TBF-1 Avenger (one 1,600 h.p. Wright Double-Row Cyclone radial motor) were the subjects of the previous recognition tests.

The Dauntless, two-seat dive bomber, is in service with the U.S. Army Air Forces and is illustrated here in the appropriate camouflage and markings. With the U.S. Navy it is also known as the Dauntless but has the code designation of SBD-3. Both versions have been in action from land and sea bases in the Pacific war zone. A 500 lb. bomb is slung under the fuselage and there is provision for light bombs under the wings.

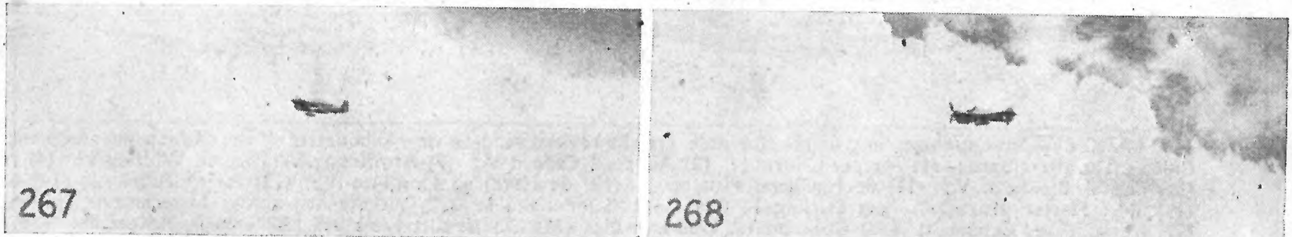
Recognition points from this angle are the highly tapered fin and rudder, long curved transparent enclosed cockpit, slim short fuselage, radial motor, and the low-wing with dihedral.

The Avenger, two-seat carrier-based torpedo-bomber of the U.S. Navy, is the best in its class in service to-day. It carries a 22.4-in. torpedo, and has a maximum speed of about 250 m.p.h. with full load, and a range of about 1,400 miles.

Points of recognition from this angle of flight are the deep fuselage with the kink of the under gun position midway between the tail and cockpit, straight tapered fin and rudder, long transparent cockpit enclosure, straight equal tapered mid-wings with square tips and dihedral outboard of the rectangular centre section, and the large radial motor.

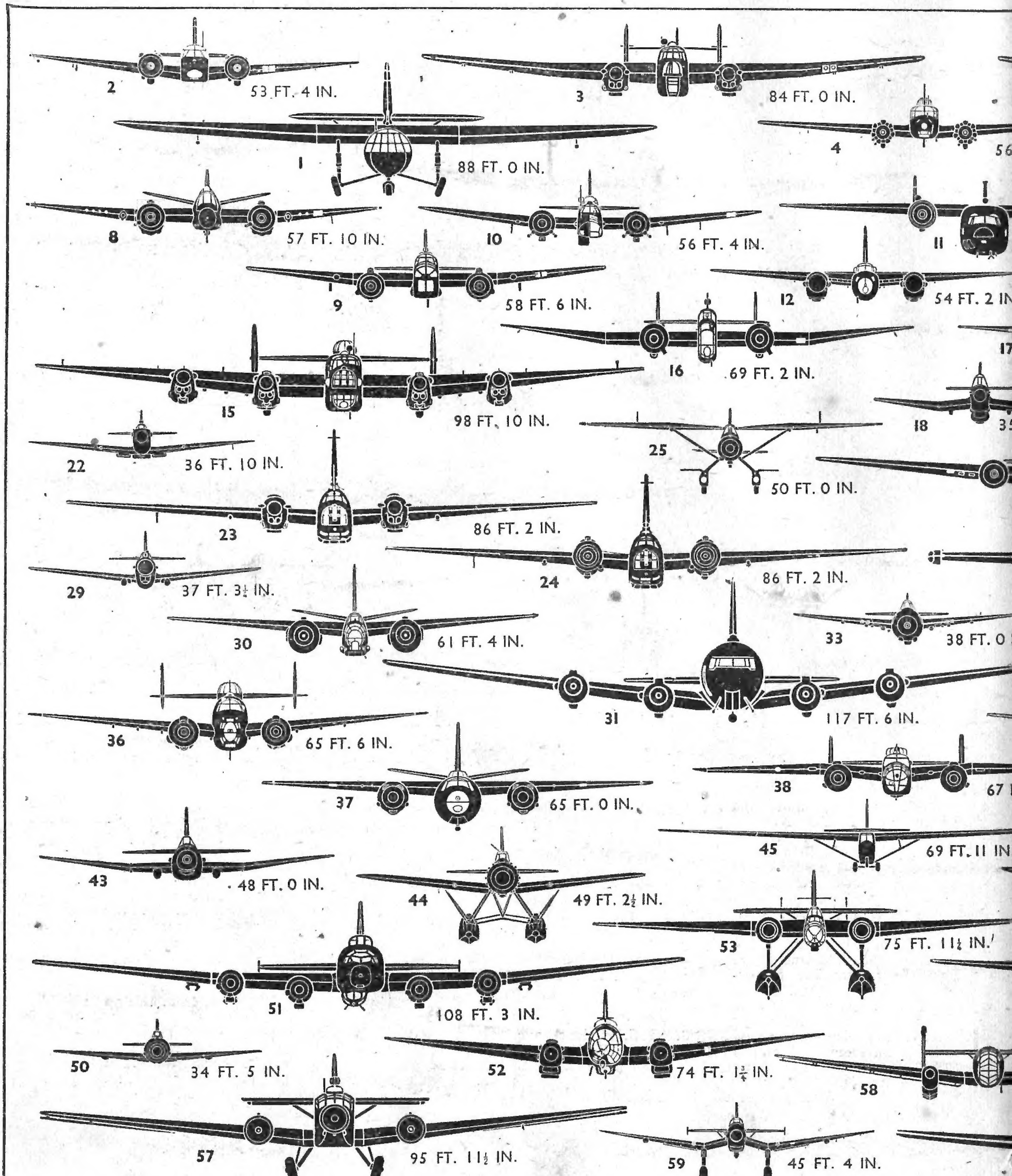


265 PREVIOUS PROBLEMS.—(Left) A Dauntless and (right) an Avenger. 266



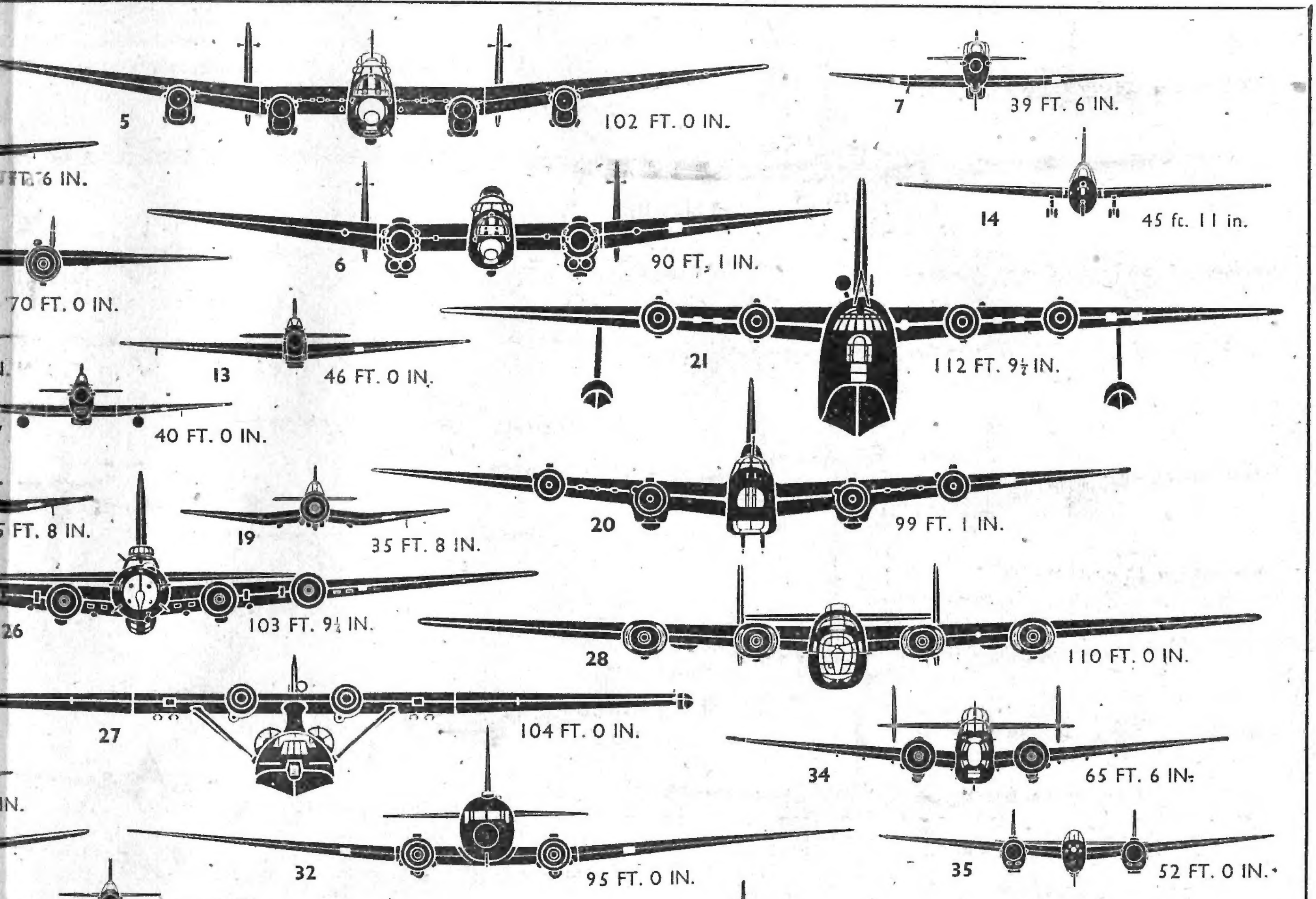
FOR IDENTIFICATION LXXX.—Two more photographs to give practice in the recognition of Allied and enemy aeroplanes. What they are and notes on their characteristics will be published with two more photographs on April 8.

THE SPOTTER'S



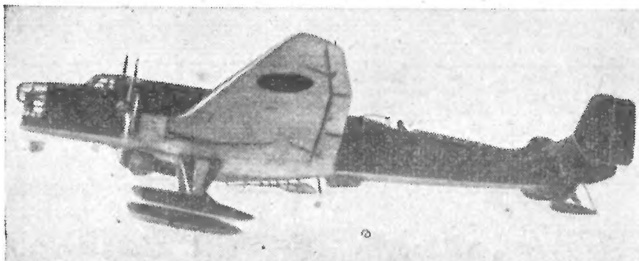
THE BASIC 64.—Set out above, in true relative scale, are the revised head-on view silhouettes of the 64 first-line aeroplanes, advanced
Clubs. The aircraft are:—(1) Airspeed Horsa I; (2) Airspeed Oxford V; (3) Armstrong Whitworth Whitley V; (4) Avro Anson
(10) Bristol Blenheim V; (11) de Havilland Flamingo; (12) de Havilland Mosquito IV; (13) Fairey Fulmar I; (14) General Airc
(19) Miles Master III; (20) Short Stirling I; (21) Short Sunderland I; (22) Vickers-Armstrongs Supermarine Spitfire IX; (23)
(27) Consolidated Catalina I; (28) Consolidated Liberator III; (29) Curtiss Kittyhawk II; (30) Douglas Boston III; (31) Douglas Sk
Vega Ventura I; (37) Martin Marauder I; (38) North American Mitchell I; (39) North American Mustang I; (40) Republic Thu
(45) D F S 230A1; (46) Dornier Do 17Z2; (47) Dornier Do 18K2; (48) Dornier Do 217E2; (49) Focke-Wulf Fw 189; (50) Fo
(55) Henschel Hs 126; (56) Henschel Hs 129; (57) Junkers Ju 52/3 mF; (58) Junkers Ju 86P; (59) Junkers Ju 87D; (60) Jun

BASIC SELECTION

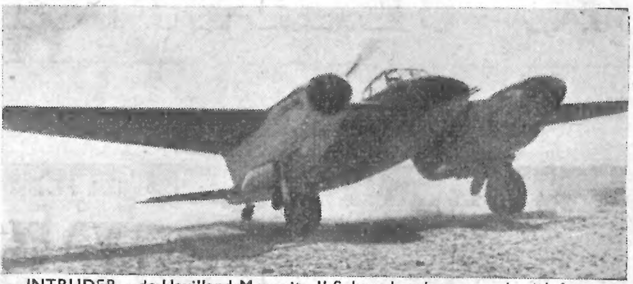


trainers and gliders, British, American and German, which comprise the revised Third Class Test of the National Association of Spotters'
I; **(5)** Avro Lancaster I; **(6)** Avro Manchester IA; **(7)** Boulton Paul Defiant I; **(8)** Bristol Beaufighter I; **(9)** Bristol Beaufort II;
raft Hotspur III; **(15)** Handley Page Halifax II; **(16)** Handley Page Hampden I; **(17)** Hawker Hurricane IIC; **(18)** Miles Master I;
Vickers-Armstrongs Wellington II; **(24)** Vickers-Armstrongs Wellington III; **(25)** Westland Lysander III; **(26)** Boeing Fortress II;
ymaster I; **(32)** Douglas Dakota I; **(33)** Grumman Martlet IV; **(34)** Lockheed Hudson III; **(35)** Lockheed Lightning I; **(36)** Lockheed-
nderbolt I; **(41)** Vought-Sikorsky Corsair I; **(42)** Vought-Sikorsky Kingfisher I; **(43)** Vultee Vengeance I; **(44)** Arado Ar 196A;
ke-Wulf Fw 190A3; **(51)** Focke-Wulf 200K2, Kurier II; **(52)** Heinkel He 111H3; **(53)** Heinkel He 115K2; **(54)** Heinkel He 177;
kers Ju 88A6; **(61)** Junkers Ju 90S; **(62)** Messerschmitt Me 109E; **(63)** Messerschmitt Me 109F; **(64)** Messerschmitt Me 210A1.

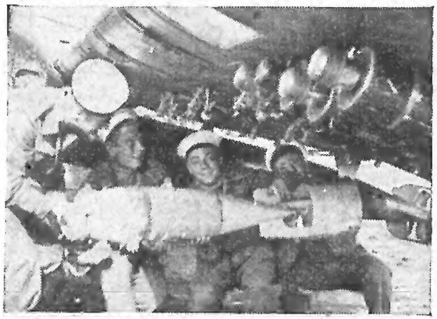
NEWS IN PHOTOGRAPHS



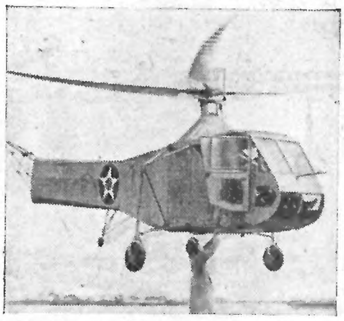
SKI-PLANE.—During the Winter months many Junkers Ju 86K medium bombers were equipped with skis for operations on the Russian front.



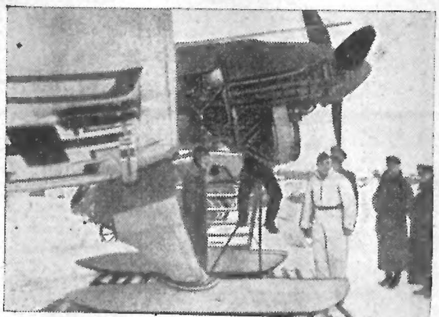
INTRUDER.—de Havilland Mosquito II fighter-bombers armed with four 20 mm. cannon and four .303 in. machine-guns are operating from Malta.



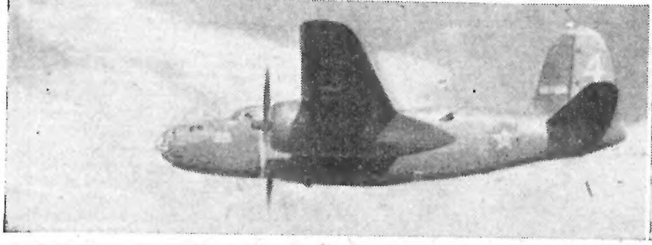
BOMBING-UP.—F.A.A. mechanics hanging a varied selection of air-borne missiles to the fuselage and wings of a Fairey Albacore.



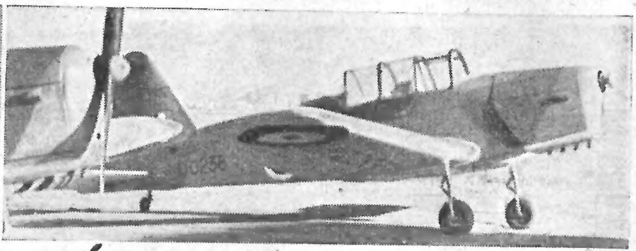
MILITARY HELICOPTER.—Vought-Sikorsky Helicopters have been ordered by the U.S. Navy and Royal Navy for convoy protection.



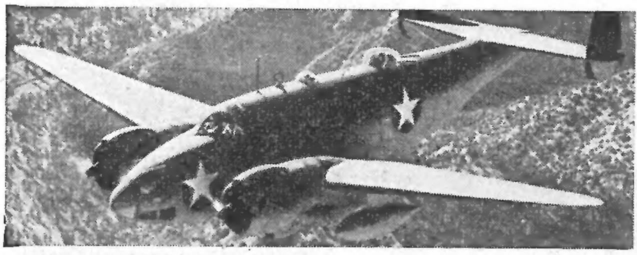
SNOW STUKA.—In company with many other German aeroplanes numbers of Junkers Ju 87Bs were put on skis during the winter months in Russia.



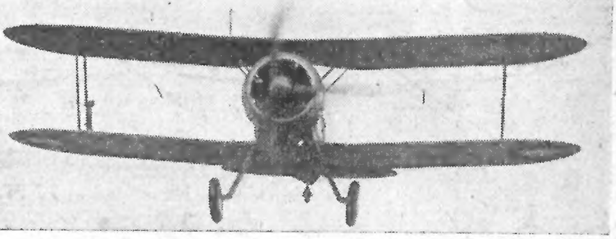
BOSTONS IN RUSSIA.—Douglas Boston III light day bombers are operating with the Red Air Fleet.



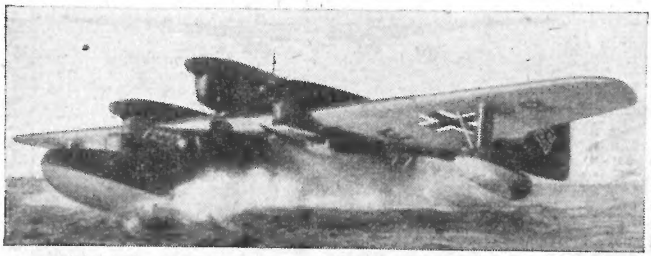
COUPÉ TRAINER.—Some Miles Magister II elementary trainers are now being built with a transparent cover over the two cockpits.



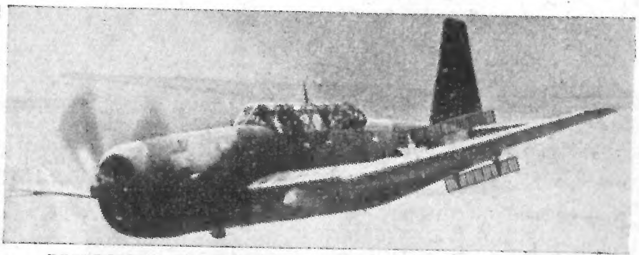
NAVAL VENTURA.—Lockheed Vega PV-1 land-based anti-submarine patrol bombers developed from the Ventura are now in service with the U.S. Navy.



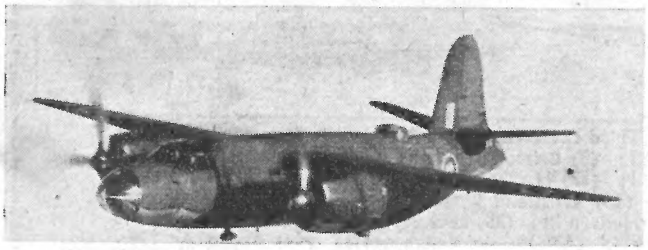
MET. FLIGHT. — Gloster Gladiators are still in service with the Royal Air Force, mainly on meteorological work.



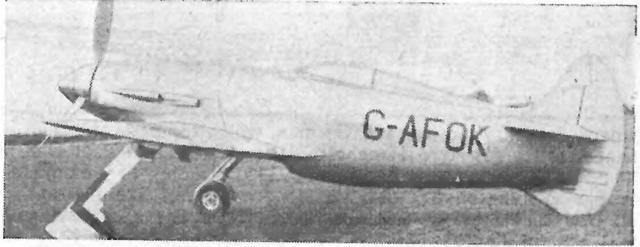
TAKING OFF.—Blohm und Voss Bv 138B flying-boats are still in service with the Luftwaffe. Many of them are operating in and around the Baltic.



DIVE-BOMBER.—Dive-brakes are fitted to both top and bottom surfaces of the wings of the Vultee Vengeance I.



MARAUDER.—Martin Marauder I high-speed day bombers are now in service with the R.A.F. in the British Isles. Maximum bomb load is 2,460 lb.



HESTON RACER.—The first Napier Sabre motor was installed in the Heston Racer built for an attempt on the World's Speed Record. It crashed on its first flight in 1940. Maximum speed was estimated at 480 m.p.h.

THE NATIONAL ASSOCIATION OF SPOTTERS' CLUBS

GENERAL COUNCIL:

Hon. General Sec. (South): P. T. Sampson, 56, Forest Drive West, E.11.
Hon. General Sec. (North): Miss M. Duncan, 10, Eden Street, Riddrie, Glasgow.

Hon. Secs. of REGIONAL COUNCILS:

NORTHERN—T. Carver (pro tem.), Royal Grammar School, Eskdale Tr., Newcastle-on-Tyne.
N-EASTERN—W. M. Sowerby, 9, Grange Park Pl., Leeds.
N-MIDLANDS—R. R. Langley, 80, Cornwall Rd., Kettering, Northants.
EASTERN—J. E. Barnes, 140, Moulsham Drive, Chelmsford.
LONDON—F. C. Palethorpe, 38, Bridgewater Road, Alperton, Middx.
SOUTHERN—A. Marple, 16, Bridge Street, Reading.
SOUTH-WESTERN—E. Griffiths, 25, Charlton Ave., Filton, Bristol, I.
WELSH—W. H. Young, 21, Beaufort Pl., St. Julians Pk., Newport, Mon.
MIDLAND—G. C. Matthews, 239, The Broadway, Dudley, Worcs.
NORTH-WESTERN—H. Pearson, 12, Plymouth Street, Oldham.
SCOTTISH—Miss M. Duncan, 10, Eden Street, Glasgow.
SOUTH-EASTERN—P. Chinery, "Little Hemingfold," Battle, Sussex.

NEW SPOTTERS' CLUBS

WE HAVE RECEIVED notice of the formation of the following new Spotters' Clubs:—

No. 553.—**Warminster S.C.**—(Hon. Sec.: G. S. Thorpe, 42, Imber Road, Warminster.) *South Western Region (No. 7).*

No. 554.—**Gravesend and District S.C.**—(Hon. Sec.: F. C. Slack, c/o Henley's Telegraph Works Co., Ltd., Gravesend.) *South Eastern Region (No. 12).*

No. 555.—**Blundell's School S.C.**—(Hon. Sec.: P. Tate, Old House, Tiverton, Devon.) *South Western Region (No. 7).*

No. 556.—**Beaconsfield S.C.**—(Hon. Sec.: D. G. Jarvis, c/o West Ridge, Knotty Green, Beaconsfield, Bucks.) *Southern Region (No. 6).*

No. 557.—**Dedham S.C.**—(Hon. Sec.: J. E. J. Eley, High Street, Dedham, Colchester, Essex.) *Eastern Region (No. 4).*

No. 558.—**No. 166 Manc. Sqdn. A.T.C. S.C.**—(Hon. Sec.: H. P. Brown, 33, Wood Road, Manchester.) *North Western Region (No. 10).*

No. 559.—**Pickerings S.C.**—(Hon. Sec.: T. W. Meek, c/o Pickerings, Ltd., Globe Elevator Works, Stockton-on-Tees.) *Northern Region (No. 1).*

No. 560.—**No. 749 Warwickshire Co. G.T.C.**—(Hon. Sec.: Sgt. P Johnson, 63, George Road, Solihull, Nr. Birmingham.) *Midland Region (No. 9).*

No. 561.—**The "Guymo" R.S.C.**—(Hon. Sec.: W. W. Burton, c/o Guy Motors, Ltd., Fallings Park, Wolverhampton.) *Midland Region (No. 9).*

No. 562.—**Southgate and District S.C.**—(Hon. Sec.: D. A. Pollock, 4, Broadfields Avenue, Winchmore Hill, N.21.) *London Region (No. 5).*

No. 563.—**Ealing County Boys School S.C.**—(Hon. Sec.: R. G. Hawkins, 73, Beresford Avenue, W.7.) *London Region (No. 5).*

No. 564.—**Chelsea 291 A.T.C. Sqdn. S.C.**—(Hon. Sec.: Cpl. R. F. B. Hawton, 93, King's Road, Chelsea, S.W.3.) *London Region (No. 5).*

CHESTERFIELD EXHIBITION OF MODEL AIRCRAFT

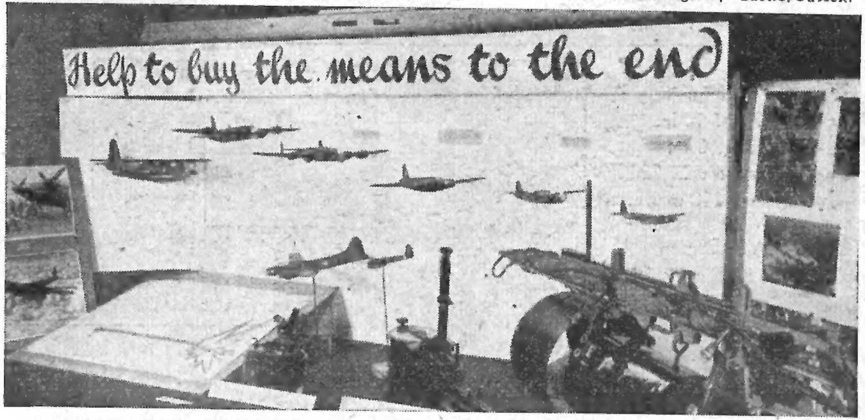
AN EXHIBITION of Model Aircraft is to be held in the Exhibition Rooms, Public Library, Corporation Street, Chesterfield, from April 10-17. It is being organised in connection with the Borough of Chesterfield "Wings for Victory" Week by the Borough of Chesterfield Raid Spotter Instructors' Club (S.C. 7).

The Classes will be as follows:—

(a) Flying scale models only (1st, 2nd and 3rd prizes); (b) Solid Scale Models, 72nd Scale, not made from commercial kit (1st, 2nd and 3rd prizes); (c) Solid Kit Models (1st prize only); (d) Junior Section (under 15 years of age) for Sections (a) and (b) (1st prize only); (e) for exhibition only—not for competition.

In addition, a prize will be awarded for the best model in the competition. A further prize will be awarded for the best model submitted by a competitor living in the Borough of Chesterfield. Entry fees:—6d. single entry, 1s. any number.

Full particulars of prizes, judges, and entry forms can be obtained from the Hon. Sec., Borough of Chesterfield Raid Spotter Instructors' Club, Civil Defence Department, Town Hall, Chesterfield.



"WINGS FOR VICTORY."—Many Spotters' Clubs in the London Region organised exhibitions during London's "Wings for Victory" week from March 6 to March 13. The photograph shows part of one of the exhibitions organised by the members of No. 11 (R.L.) Spotters' Club and No. 21 (Wembley A.T.C.) Spotters' Club.

TWELFTH MEETING OF EXECUTIVE COMMITTEE

SIX MEMBERS of the Executive Committee of the General Council were present at the twelfth meeting of the Committee held in London on March 16. Also present were Mr. M. R. T. Edwards, Hon. Treasurer of the N.A.S.C., Mr. P. W. Hastings, Hon. Treasurer of the London Region, and Miss Hodsoll. Mr. S. F. Sabin was in the chair.

The minutes of the eleventh meeting of the Committee were passed and various members of the Committee reported on the actions they had taken as a result of the previous meeting. Mr. P. T. Sampson had received an account from the ex-Librarian, and Mr. C. F. Andrews reported on the progress being made in the publication of Third Class Test Cards.

Mr. S. F. Sabin commented on the issue of Ministry of Home Security silhouette cards to club training officers. Draft "Notes for Regional Hon. Secretaries No. 5" were approved and Mr. Harris reported the progress being made by the Competitions Sub-committee in organising the contests for the trophies, presented by the Air League of the British Empire and by Wing Cmdr. Hodsoll.

The meeting concluded with a discussion on a standard syllabus of training for use by Club Training Officers in their clubs.

CONTEST IN DORKING

AN AIRCRAFT RECOGNITION CONTEST is being organized by S.C. 182 (Dorking A.T.C.) in connection with the "Wings for Victory" week in Dorking.

The contest is open to teams of three members from Spotters' Clubs in the South Eastern Region. Clubs may enter more than one team. The entry fee is 2s. 6d. for each team, and prizes will be in the form of savings certificates and stamps.

The contest will take place in Dorking either on May 15 or 22; the date will be announced later. All teams wishing to compete should write to: A. G. Shipton, 7, Cliftonville, Dorking, Surrey.

MOSLEY CUP COMPETITION

THE HALF-YEARLY Recognition Competition for the Mosley Cup was held in Leeds on Feb. 20, conducted by P. Gill. Spotters Club No. 259 won the competition with 271 marks out of a possible 315. The highest individual scores were gained by D. Allonby and T. R. Allonby with 60 marks out of a possible 63.

The cup and prizes were presented to the winners by the President, Brig. H. S. Mosley, D.S.O., who congratulated them and thanked the 12 Clubs who took part, for their support and enthusiasm.

SPOTTERS IN SHOTTS, LANARKSHIRE

MR. GEORGE MUIR is hoping to form a Spotters' Club in the Shotts area, and all interested are invited to write to him at: 146, Station Road, Dykehead, Shotts, Lanarkshire, Scotland.

OPEN MEMBERSHIP

S.C. NO. 250 (No. 733 A.T.C. Sqdn.) has decided to open membership to all members of the College of Commerce and to Raid Spotters. Further details from Hon. Sec.: Howard Lambert, College Street, Newcastle-upon-Tyne, 2.

FORTHCOMING EVENTS

March 25

Harrow.—Kodak Social Centre.—19.30 hrs.—(S.C. 75.)
Doncaster.—21, French Gate.—19.00 hrs.—(S.C. 106.)
Westminster.—Thorneycroft House.—18.00 hrs.—(S.C. 142.)
Cambridge.—Chivers and Sons, Ltd.—19.30 hrs.—(S.C. 145.)
Guildford.—County Technical College, Stoke Park.—19.30 hrs.—(S.C. 150.)
Seaham.—Rock House.—18.30 hrs.—(S.C. 230.)
Crosby.—St. Mary's College.—19.00 hrs.—(S.C. 320)
Battersea Men's Institute, Latchmere Road, S.W.11.—19.45 hrs.—(S.C. 483.)
Beaconsfield.—Council Hall.—19.30 hrs.—(S.C. 556.)

March 26

Kentish Town.—The North Western Polytechnic, Prince of Wales Rd., N.W.5.—18.30 hrs.—(S.C. 16.)
Sunderland.—Town Hall—19.30 hrs.—(S.C. 37.)
Watford.—Public Library, Hempstead Road.—19.30 hrs.—(S.C. 118.)
Hoddesdon.—Clock House.—19.30 hrs.—(S.C. 128.)

March 27

Ratcliffe College.—17.30 hrs—(S.C. 331.)
Tunbridge Wells.—Offices of the Regional Commissioner, "Bredbury."—15.00 hrs.—(South Eastern Regional Council.)

March 28

Plymouth.—Toc H, Gilwell St—11.00 hrs.—(S.C. 299.)
Ratcliffe College.—19.45 hrs.—(S.C. 331.)

March 30

London.—Meeting of Executive Committee of General Council.—Bowling Green Lane, E.C.1.—18.00 hrs.
Southend.—A.R.P. Headquarters, 120, Victoria Av.—19.00 hrs.—(S.C.1.)
N. London.—Northern Polytechnic, Holloway Rd., N.7.—19.00 hrs.—(S.C. 156.)
Crosby.—St. Mary's College.—19.00 hrs.—(S.C. 320.)

March 31

Hastings.—White Rock Pavilion.—19.30 hrs.—(S.C. 47.)
Rickmansworth.—112, High Street.—19.30 hrs.—(S.C. 81.)
Walton-on-Thames.—Anglo-Iranian Oil Co., Ltd., New Zealand Av.—19.45 hrs.—(S.C. 96.)
Dagenham.—Ford Sports Pavilion, Kent Avenue.—19.00 hrs.—(S.C. 99.)
Dudley.—Hen and Chickens Inn.—19.15 hrs.—(S.C. 113.)
Sheffield.—Geo. Senior and Sons, Ltd., Ponds Forge, Sheaf St.—19.00 hrs.—(S.C. 178.)
Wigan.—Town Hall.—19.15 hrs.—(S.C. 266.)

April 1

Harrow.—Kodak Social Centre.—19.30 hrs.—(S.C. 75.)
Doncaster.—21, French Gate.—19.00 hrs.—(S.C. 106.)
Guildford.—County Technical College, Stoke Park.—19.30 hrs.—(S.C. 150.)
Seaham.—Rock House.—18.30 hrs.—(S.C. 230.)
Crosby.—St. Mary's College.—19.00 hrs.—(S.C. 320.)
Battersea Men's Institute, Latchmere Rd, S.W.11.—19.45 hrs.—(S.C. 483.)

April 2

Huddersfield.—A.R.P. Hdqrs., South Parade.—19.00 hrs.—(S.C. 49.)
Hoddesdon.—Clock House—19.30 hrs.—(S.C. 128.)
Leeds.—College of Technology.—18.30 hrs.—(S.C. 148.)
Stapleford.—Constitutional Club.—19.00 hrs.—(S.C. 159)
Oxford.—Police Station.—19.00 hrs.—(S.C. 162.)
Downham.—Community Centre, Castillon Road.—19.15 hrs.—(S.C. 454.)

April 5

Appleby.—Grammar School.—(S.C. 411.)

April 6

London.—4th C.T.O.'s meeting.—Regional Staff School, South Kensington.—18.45 hrs.—(Open to two delegates from all clubs in London.)
Streatham Common.—St. Joseph's College, A.T.C. Hdqrs., Crown Point.—19.00 hrs.—(S.C. 13.)
N. London.—Northern Polytechnic, Holloway Rd., N.7.—19.00 hrs. (S.C. 156.)
Crosby.—St. Mary's College.—19.00 hrs.—(S.C. 320.)

April 7

Blackfriars.—Cinema, Unilever House.—18.00 hrs.—(S.C. 12.)
Belfast.—45 Howard St.—(S.C. 151.)
Sheffield.—Victoria Hall—19.00 hrs.—(S.C. 178.)
Wigan.—Town Hall.—19.15 hrs.—(S.C. 266.)

April 8

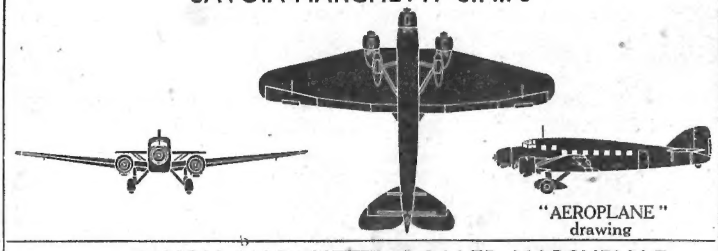
Harrow.—Kodak Social Centre.—19.30 hrs.—(S.C. 75)
Westminster.—Thorneycroft House.—18.00 hrs.—(S.C. 142.)

AIRCRAFT COMPARISONS—LXXX

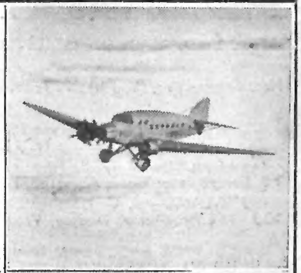
ITALIAN TRI-MOTORS

SAVOIA-MARCHETTI S.M.73

Span: 78 ft. 8½ in.
Length: 57 ft. 2½ in.
Height: 15 ft. 0 in.
Loaded Weight: 22,990 lb.
Max. Speed: 205 m.p.h. at 13,120 ft.
Three Piaggio Stella IX R.C. air-cooled radial motors, 700 h.p.

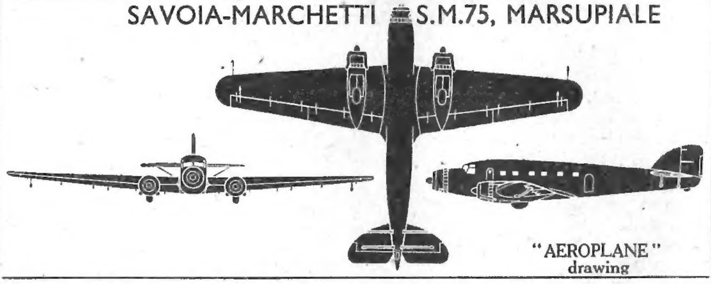


"AEROPLANE" drawing

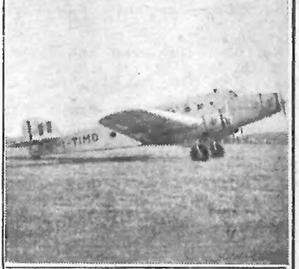


SAVOIA-MARCHETTI S.M.75, MARSUPIALE

Span: 97 ft. 5 in.
Length: 73 ft. 10 in.
Height: 17 ft. 8 in.
Loaded Weight: 27,720 lb.
Max. Speed: 210 m.p.h. at 6,560 ft.
Three Alfa-Romeo 126 R.C.34 air-cooled radial motors, 750 h.p.

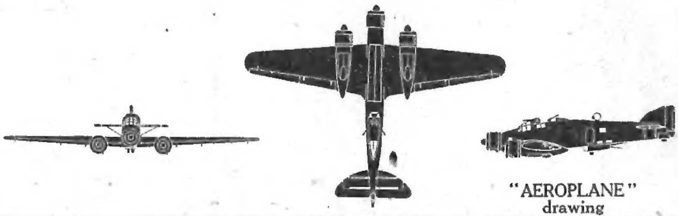


"AEROPLANE" drawing

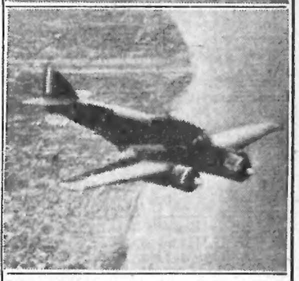


SAVOIA-MARCHETTI S.M.79, SPARVIERO

Span: 69 ft. 9 in.
Length: 52 ft. 3 in.
Height: 13 ft. 6 in.
Loaded Weight: 23,200 lb.
Max. Speed: 264 m.p.h. at 12,500 ft.
Three Alfa-Romeo 126 R.C.34 air-cooled radial motors, 750 h.p.

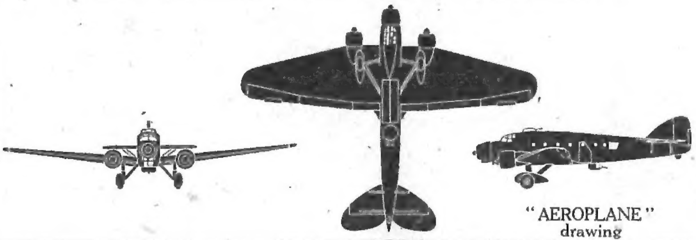


"AEROPLANE" drawing

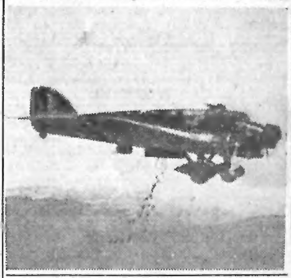


SAVOIA-MARCHETTI S.M.81, PIPISTRELLO

Span: 78 ft. 8½ in.
Length: 60 ft. 1 in.
Height: 15 ft. 9 in.
Loaded Weight: 20,500 lb.
Max. Speed: 211 m.p.h. at 9,840 ft.
Three Piaggio Stella X R.C. air-cooled radial motors, 700 h.p.

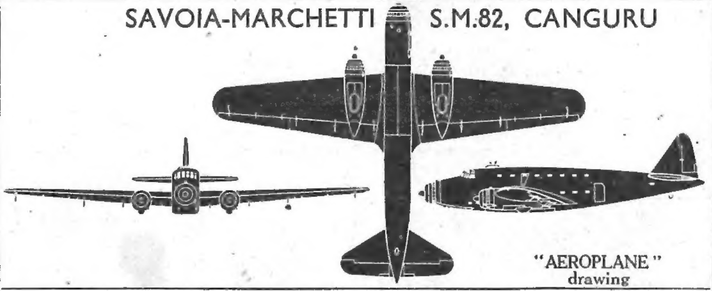


"AEROPLANE" drawing

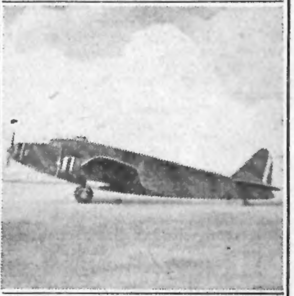


SAVOIA-MARCHETTI S.M.82, CANGURU

Span: 97 ft. 5 in.
Length: 73 ft. 10 in.
Height: 18 ft. 0 in.
Loaded Weight: 38,000 lb.
Max. Speed: 230 m.p.h. at 8,200 ft.
Three Alfa-Romeo 128 R.C.21 air-cooled radial motors, 950 h.p.

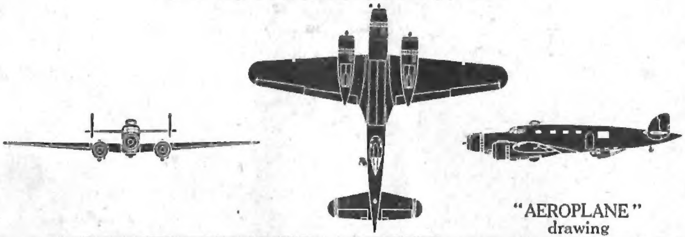


"AEROPLANE" drawing

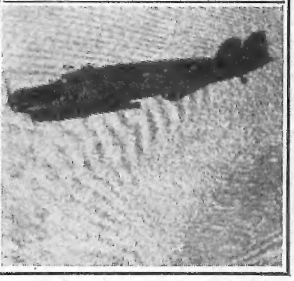


SAVOIA-MARCHETTI S.M.84

Span: 69 ft. 3 in.
Length: 58 ft. 9 in.
Loaded Weight: About 25,000 lb.
Max. Speed: About 260 m.p.h. at 12,500 ft.
Three Alfa-Romeo 126 R.C.34 air-cooled radial motors, 750 h.p.

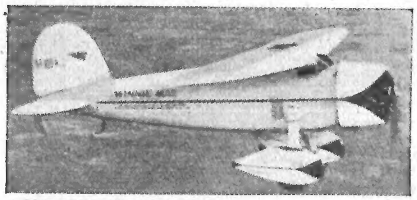


"AEROPLANE" drawing



THE WOODEN WALLS OF ITALY.—All these Savoia-Marchetti tri-motor transports and bombers have wings of wooden construction. The S.M.73 was produced in 1934 as a transport. Recently, numbers have been used in conjunction with other Axis aeroplanes to supply the German and Italian forces in North Africa. At one time, since the beginning of the War, there were seven S.M.73s in this country. Sixteen feet larger in span, the S.M.75, Marsupiale, is now used as a military instead of a civil transport. A floatplane version was built for an Argentine Co. for operation from South American rivers and numbered the S.M.87. From 1938 to 1942 the S.M.79, Sparviero, was the standard bomber of the Regia Aeronautica and saw service in Africa, Spain, Albania and over the Mediterranean. A two-motor passenger air liner, the S.M.79B was developed from the Sparviero. The S.M.81, Pipistrello, first flew in 1935 and is now used for night bombing and troop carrying. Each of the two hydraulically operated turrets mounts two 0.472-in. machine-guns. Developed from the S.M.75, the S.M.82, Canguru, has a deeper fuselage, greater loaded weight, a redesigned tail unit and a single, retractable, hydraulically operated dorsal gun turret just aft of the pilot's cockpit. It is used for night bombing, troop carrying, for transporting petrol and water, and on occasions for carrying dismantled Fiat C.R.42 single-seat biplane fighters. An aerodynamic clean-up of the S.M.79 produced the S.M.84 torpedo-bomber which is operating over the Mediterranean. At one time the Italians gave it the number S.M.94 but they have now reverted to S.M.84 despite the fact that an earlier two-motor transport bore the same number. Soon after the appearance of the S.M.84 one scored a hit with a torpedo on the battleship Nelson.

CORRESPONDENCE



THE RECORD BREAKER.—The Lockheed Vega "Winnie Mae" in the condition in which it flew round the Top of the World in record time

THE "WINNIE MAE"

IN THE AEROPLANE SPOTTER No. 79, in Famous Aircraft, the photograph showed the Lockheed Vega with a retractable undercarriage. I, and others, were under the impression that it had a large spatted undercarriage like a Stinson Reliant. M. E. NORRIS.

[The photograph was of Wiley Post's Lockheed Vega "Winnie Mae" in its final form. Wiley Post had decided to use it for a sub-stratosphere flight across the American Continent at very high speed (for those days) and arranged not to retract the undercarriage but to jettison it altogether at the start of the flight, thus saving both weight and drag, so that he could fly higher, faster and farther. The bottom of the fuselage was strengthened with skids and Wiley Post landed his Vega in this undercarriage-less condition without any damage, even to the airscrew, which he stopped horizontally. Normally, the Lockheed Vega had a wire-braced low drag fixed-undercarriage with very large spats.—ED.]

"K FOR KURFÜRST"

I WONDER if you could give me some information about two aircraft which were mentioned in the "Daily Telegraph" recently.

First, a German reporter who flew over London in the last air raid of any size said that he was in a Kurfürst locating 'plane. I know that Kurfürst is the German for Electoral Prince, e.g., Der Kurfürst von Brandenburg—The Elector of Brandenburg—but to what type of aeroplane does it refer? Is a locating 'plane the German equivalent of our pathfinder?

Second, in a recent debate in Parliament about the Fleet Air Arm, the Drummond Martin aeroplane was mentioned. Is this a different name for some well-known type? NEVILLE BEALE, R.O.C.

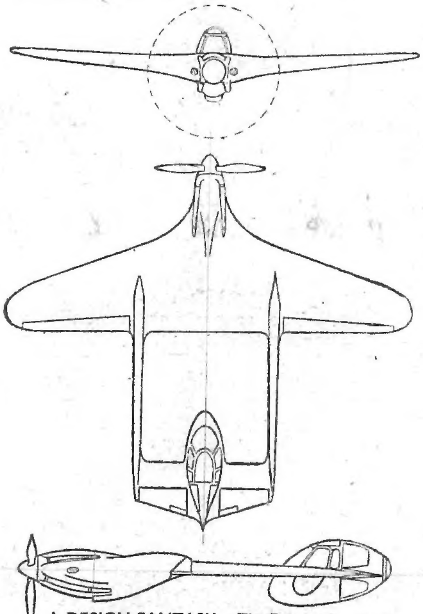
[In the same way that an aeroplane in the R.A.F. is called "F for Freddie" or "H for Harry," so, in this particular instance, the aeroplane in the raiding Luftwaffe force was called "K for Kurfürst." According to the German "Hambürger Fremdenblatt" of March 6, 1943, the aeroplane was called Anton-Kurfürst—the A standing for the number of the squadron and the K the number of the aeroplane in that particular squadron or wing. The raiders on this occasion were reported as being Dornier Do 217s and Junkers Ju 88s. "K for Kurfürst" was carrying out duties similar to those of the R.A.F.'s pathfinders. The so-called "Drummond Martin" was a misquotation of the Grumman Martlet.—ED.]

A DESIGN ONLY

COULD YOU please tell me what became of the Airspeed experimental single-seat fighter of circa 1938. So far as I know it was a twin-boom tractor powered with one Rolls-Royce Merlin, and the pilot's cockpit was placed on the tailplane and faired into the single fin and rudder, a rather curious arrangement. I have seen the armament variously stated as between four and eight machine-guns mounted in the wings. The estimated top speed of 450 m.p.h. seems even more optimistic than that of the American Manta. Was this machine ever built or flown, and was it a private venture or was it designed to an Air Ministry specification?

What happened to the highly unorthodox Delanne two-seat fighter? IAN NEWLY LAMBERTY.

[A patent (No. 470,650) was taken out for this Airspeed fighter in 1937 and the patent drawings were published in THE AEROPLANE on October 27, 1937. The machine was only an interesting idea and was never built, one theory being that the pilot would have been so airsick because of the large moments caused by his position in the fin that he would never have been able to control the machine. The French Delanne fighter crashed on its first test flight and killed that fine French sporting pilot and private owner Monsieur Guy de Chateaubrun.—ED.]



A DESIGN FANTASY.—The Patent drawings of the projected Airspeed fighter of 1937 which was never built.

THE "Ju 88K"

RECENTLY I was engaged in an argument regarding the Junkers Ju 88 and variants. My opponent argued that there was a Ju 88K. He then brought along a cutting from an "Airyda" advertisement definitely naming a Ju 88K. I still claimed that there was no such aeroplane. D. HALE.

[The first Junkers Ju 88 to be built was given the civil registration letters D-ASAZ and was used for various record-breaking flights in which it achieved a speed of 321 m.p.h. over 621 miles. When the military version appeared in place of the streamlined prototype it was named the Ju 88K to distinguish it from the civil machine—the "K," as in the Ju 86K and Ju 52/3mK standing for "Krieg" or "War." This Ju 88K was identical with the Ju 88A1, the first version of the first mark number.—ED.]

BEAU-TORPEDOER

IN YOUR issue of Feb. 11 you state that the Beaufighter now carries a torpedo. If this is so, is it possible to accommodate the four cannon as before without changing the appearance of the nose area?

Recently, while conversing about the Hawker biplane, a friend mentioned the Hawker Tomtit. This is a new one on me. M.J.J.

[We are not yet permitted to enlarge on the features of the Bristol Beaufighter torpedo-bomber, but obviously a torpedo could be slung outside without much modification.

The Hawker Tomtit was a two-seat training biplane originally powered with a 130 h.p. Armstrong-Siddeley Mongoose seven-cylinder radial motor but later equipped with various Wolseley radials and at one time with a Cirrus. One Tomtit is still flying, owned by Alex. Henshaw, who is now test-flying Spitfires. The Tomtit will be dealt with in Civil Identification shortly.—ED.]

SHUTTING THE STABLE DOOR . . .

IN reply to a letter in your issue of Jan. 14, you state that there has been a hold-up in the issue of recognition material on the Typhoon to A.A. gunners and other arms. I would like to state that in the factory where I work there has been a photograph of the Typhoon in the "From the Fight to the Factory" series on the wall for at least four months. Also, during our Production Month, there has been a small exhibition in which was a model of the Typhoon, and also of another aircraft still on the secret list.

Incidentally, a photograph of the Lancaster was put up before photographs and silhouettes had been generally released.

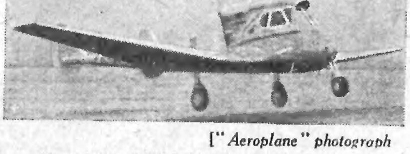
Surely, if factory workers are allowed to see these photographs and models, A.A. gunners and others whom they more closely concern should be allowed to see them also. J.H.C.

THE STEARMAN-HAMMOND

WHILE looking through some aeronautical journals recently I came across a photograph of the K.L.M. Stearman-Hammond aeroplane with the inscription "specially designed in Holland for training pilots."

Could you please tell me what became of this aeroplane? Also could you inform me as to what happened to the Koolhoven F.K.55 and the Bristol 138? P. R. BURTON.

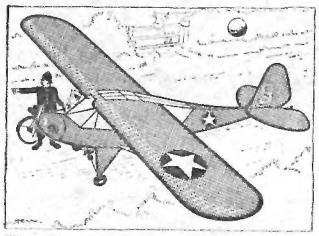
[The Stearman-Hammond Model Y-1 was a little tricycle pusher monoplane with twin booms and two seats side by side. It was designed and built in the U.S.A. and sold to K.L.M. in Holland so that the Netherlands pilots could learn the technique of tricycle landing gears before flying the new Douglas DC-5 transports then on order. We saw this aeroplane at Schiphol Airport, Amsterdam, early in May, 1940, just before the German invasion, and it was probably destroyed then, as was the Koolhoven F.K.55, the flying trials of which had been restricted at Waalhaven Airport, Rotterdam, because of trouble with the gearing for the counter-rotating airscrew. The Bristol 138 is probably mouldering at the R.A.E.—ED.]



["*Aeroplane*" photograph

THE STEARMAN-HAMMOND MODEL Y-1.

ODDENTIFICATION—C

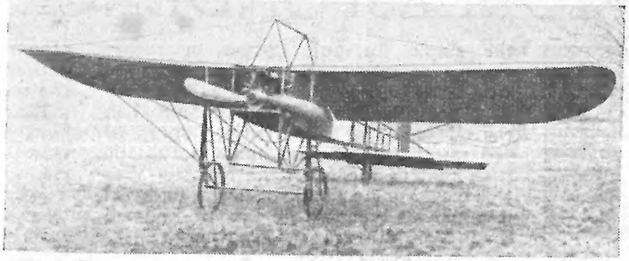


The Piper L-4, the Grasshopper.

DO YOU KNOW?—LI

1. The engines fitted to the Grumman Goose?
2. The aeroplane from which the Whitley was developed?
3. A British twin-engined low-wing monoplane flying with either fixed or retractable undercarriage?
4. The British name for the Warhawk?
5. The armament of the Hurricane IIA?
6. The aeroplane that holds the World's Speed Record?
7. A single-engined biplane with a high-set tailplane?
8. Two aeroplanes with radial cowlings to their in-line motors?
9. The forward firing armament of (i) the Boston III; (ii) Havoc II.
10. In what recognition characteristic the Japanese Heinkel He 111 (Army OB-98) differs from the German version?

FAMOUS AIRCRAFT—VII



THE BLÉRIOT XI—1909.—Louis Blériot, a French pioneer, started building aeroplanes in 1907. His "Type XI" appeared in 1909 and was an immediate success. A number were made but the design was much modified from time to time, principally in the tail unit. On a "Type XI" Blériot himself made the first crossing of the English Channel on July 25, 1909. Starting out from Les Baraques, near Sangette, at 4.40 a.m., he soon overtook the French destroyer Escopette, which had been sent out to assist him if necessary. Without either clock or compass Blériot was out of sight of land for ten minutes and the attempt was more hazardous than appears nowadays chiefly because of the absence of any reserve of power. He crash landed in Northfall meadow, a field full of great hummocks behind Dover Castle, after a 40-minute flight at an average speed of 45 m.p.h. The motor of the cross-Channel Blériot XI was an air- (and rain-) cooled Anzani radial of 25 h.p., with three cylinders arranged like a fan. The span of the aeroplane was 28 ft. and its all-up weight was 715 lb. The speed of the Blériot XI varied from 36 m.p.h. to 56 m.p.h. with specific modifications, the highest figure being that of the racing version. After flying the Channel, this most famous Blériot XI was exhibited at Selfridges and ultimately found a permanent resting place in the Museé des Arts et Mètiers, Paris.

ANSWERS TO "DO YOU KNOW?" L

1. The Cant Z.501 now has a gun turret in place of the open gun position in the nacelle.
2. Russian TB-7; Bell Airacuda.
3. Blohm und Voss Bv 222; Messerschmitt Me 323.
4. Republic Thunderbolt.
5. Mitsubishi SSH-00.
6. The Barracuda.
7. The Bristol Beaufighter; Douglas Havoc.
8. Mosquito II is a "solid" nosed version used as an intruder, armed with four cannon and four machine-guns. The Mosquito IV is the bomber with transparent nose.
9. French Gnome-Rhone 14m radial motors. Early versions had Argus As 410 in-line motors.
10. Avro Lancaster II.

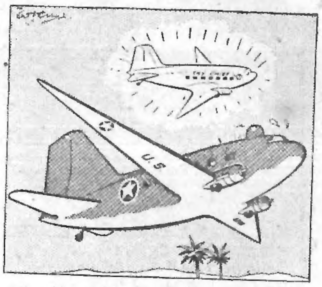
"EVANS OF THE BROKE" CONTEST

THE latest contest in the series was held on March 15 at Regional H/Q. Admiral Sir Edward Evans, K.C.B., D.S.O., attended to present his Trophy. Only 10 teams competed, representing six Clubs. Nevertheless the questions set by Mr. P. Gill, R.R.S.O. North-Eastern Region, were hotly contested.

The test resulted in a tie between S.C.75 (Harrow and District) "B" team and S.C.43 (South Kensington) "A" team each with 87 points. S.C.75 having previously held the Cup agreed to let S.C.43 take possession. Runners-up were S.C.75 "A" team with 82 points out of a possible 120.

The whole evening was most enjoyable and it is to be regretted that more Raid Spotting Clubs do not take advantage of the excellent programmes arranged for their enjoyment and help.

ODDENTIFICATION—CI



The Douglas C-47, the Skytrain.

MODELS TO ORDER

MR. J. S. GREEN, of Silverleigh, 78, Cranmore Lane, Aldershot, Hants, offers to build to order any model of any type of aeroplane of which drawings exist. Prices range from 5s. to 30s. according to the size and detail desired. Two types of model are made, one without detail and painted a uniform colour all over, and the other fully detailed and with transparent "glasshouses," camouflage and insigna. Anybody desirous of further information should write to the address given above.

BACK ISSUES AVAILABLE

Copies of any or all of issues Nos. 34 to 46 inclusive and of Nos. 62-78 inclusive of THE AEROPLANE SPOTTER may be had from the Back Issue Exchange in exchange for an equal number of other issues, together with 6d. in stamps to cover expenses. Where possible, the numbers of any issues which would be acceptable instead of those ordered should be given in case stocks are exhausted.

For the moment, no other issues are available and applications for them cannot be considered.

Copies and all correspondence should be sent to Mr. P. T. Sampson, 80, Fairlop Road, London, E.11.

THE SPOTTERS' GLOSSARY OF AERONAUTICAL TERMS

TRICYCLE UNDERCARRIAGE.—A landing gear which incorporates a nose wheel and two main wheels which are located behind the Centre of Gravity so that the aeroplane remains in approximately flying attitude when on the ground.

TRIPLANE.—An aeroplane with three main planes superimposed one above the other.

TROPOPAUSE.—The region of the atmosphere between the stratosphere and the troposphere.

TROPOSPHERE.—The lower layer of the atmosphere in which the change of temperature with height is relatively large and decreases with an increase in height. The troposphere extends up to approximately 33,000 ft.

TROOP CARRIER.—A transport aeroplane expressly designed or converted for carrying air-borne troops.

TROPICAL REVOLVING STORMS.—The generic term for the type of cyclonic depression known in various parts of the World as hurricane, cyclone or typhoon.

TROUGH.—A valley of low atmospheric pressure, as opposed to a ridge of high pressure.

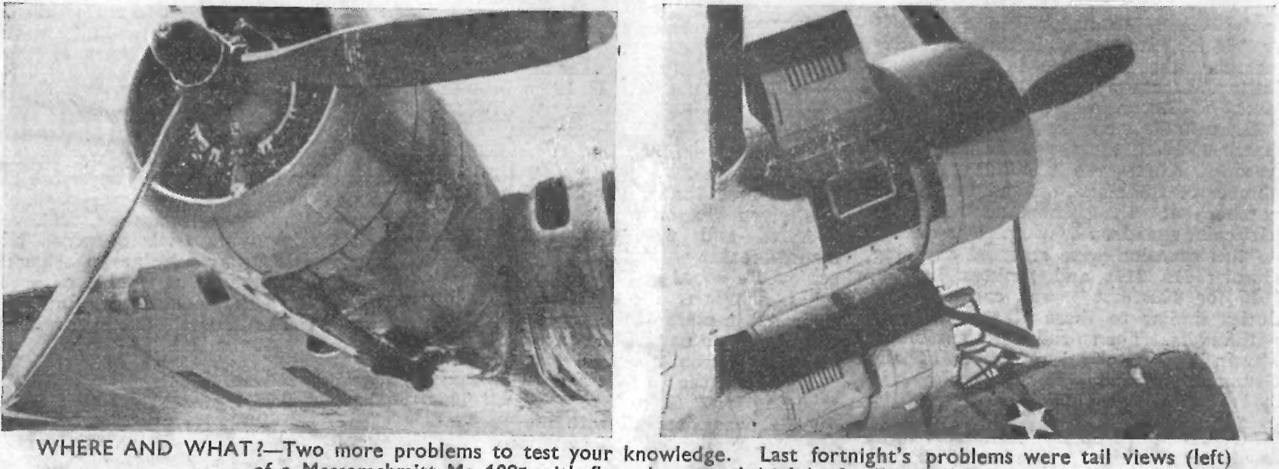
TRUE AIR SPEED.—The speed of an aeroplane through the air in which it is flying, corrected for errors in Indicated Air Speed and contrasted with ground speed.

TRUE COURSE.—The angle between the longitudinal axis of an aeroplane and a true meridian.

TURBULENT FLOW.—Irregular periodic motion of a fluid, such as air. Air flow is said to be turbulent instead of laminar (or smooth) when it breaks away from the surface of any aerofoil.

TURNBUCKLE.—A double-ended eyebolt with a left and right-handed thread in the central nut. A turn of the latter draws both bolts together, thus increasing the tension in the rod or wire to which the turnbuckle is attached. Turnbuckles were used profusely on the older wire-braced aeroplane structures.

(To be continued)



WHERE AND WHAT?—Two more problems to test your knowledge. Last fortnight's problems were tail views (left) of a Messerschmitt Me 109F with flaps down, and (right) of a Fairey Fulmar.

Printed in England and Published Fortnightly by the Proprietors TEMPLE PRESS LTD., BOWLING GREEN LANE, LONDON, E.C.1.
AGENTS ABROAD—U.S.A.—The International News Co., New York, N.Y. CANADA—W. Dawson & Sons (Subscription Service), Ltd., Toronto, etc.; Imperial News Co., Ltd., Toronto, etc.; Gordon & Gotch, Ltd., Toronto. AFRICA—Central News Agency, Ltd., Cape Town, etc., W. Dawson & Sons (S.A.), Cape Town. INDIA—A. H. Wheeler & Co., Allahabad, Bombay, Calcutta, etc. AUSTRALASIA—Gordon & Gotch (A'sia), Ltd., Sydney, Melbourne, Adelaide, Brisbane, Perth, Launceston, Wellington, etc.